



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2021-1178; Project Identifier MCAI-2021-00986-R; Amendment 39-21986; AD 2022-06-20]**

**RIN 2120-AA64**

**Airworthiness Directives; Bell Textron Canada Limited (Type Certificate Previously Held by Bell Helicopter Textron Canada Limited) Helicopters**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** The FAA is superseding Airworthiness Directive (AD) 2020-20-06, which applied to certain Bell Helicopter Textron Canada Limited (now Bell Textron Canada Limited) Model 429 helicopters. AD 2020-20-06 required repetitive inspections of certain cyclic and collective assembly bearings. This AD was prompted by new bellcrank assemblies, which have been upgraded with corrosion resistant steel bearings. This AD retains certain requirements of AD 2020-20-06, and depending on the inspection results, requires removing certain parts from service and installing the upgraded cyclic and collective bellcrank assemblies. This AD also requires installing the upgraded collective and cyclic bellcrank assemblies on certain helicopters if not already installed, and prohibits installing certain bellcrank assemblies. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J 1R4, Canada; telephone 1-450-437-2862 or 1-800-363-8023; fax 1-450-433-0272; email [productsupport@bellflight.com](mailto:productsupport@bellflight.com); or at <https://www.bellflight.com/support/contact-support>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-1178; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the Transport Canada AD, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7330; email [andrea.jimenez@faa.gov](mailto:andrea.jimenez@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Background**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2020-20-06, Amendment 39-21262 (85 FR 60356, September 25, 2020) (AD 2020-20-06). AD 2020-20-06 applied to Bell Helicopter Textron Canada Limited Model 429 helicopters with a bellcrank assembly part number (P/N) 429-001-

523-101, 429-001-523-103, 429-001-532-101, or 429-001-532-103 installed. The NPRM published in the *Federal Register* on January 14, 2022 (87 FR 2362). In the NPRM, the FAA proposed to retain some of the requirements of AD 2020-20-06, and proposed to require, for certain serial-numbered helicopters, within 12 months after the helicopter was manufactured or 30 days, whichever occurs later, and thereafter at intervals not to exceed 6 months, disconnecting certain parts, stowing certain parts to prevent binding, and moving the cyclic stick and the collective stick to inspect for roughness in the flight control system and binding in the collective, lateral, and longitudinal arm assemblies. If any of these conditions exist, the NPRM proposed to require, before further flight, removing certain parts from service and installing upgraded bellcrank assemblies.

Additionally, the NPRM proposed to require, for certain serial-numbered helicopters that do not have the upgraded bellcrank assemblies installed, within 24 months, installing the upgraded bellcrank assemblies, which would provide a terminating action for the recurring inspections. Finally, the NPRM proposed to prohibit installing any affected bellcrank assembly on any helicopter.

The NPRM was prompted by Transport Canada AD CF-2016-11R3, dated August 30, 2021 (Transport Canada AD CF-2016-11R3), issued by Transport Canada, which is the aviation authority for Canada, to correct an unsafe condition for Bell Textron Canada Limited Model 429 helicopters, all serial numbers. Transport Canada advises of new collective and cyclic bellcrank assemblies which have been upgraded with corrosion resistant steel bearings. This condition, if not addressed, could result in restrictions in the collective, directional, or pitch control systems, and subsequent loss of helicopter control.

Accordingly, Transport Canada AD CF-2016-11R3 requires for certain serial-numbered helicopters, within 12 months from the helicopter manufacture date, or for helicopters that have exceeded the age threshold of 12 months from the helicopter manufacturer date, within 30 days, and thereafter at intervals not to exceed 6 months,

performing a functional check of the flight controls to detect roughness in the pivot bearings and binding of the collective, lateral, or longitudinal arm end bearings of the bellcrank assemblies. If any roughness or binding is detected, Transport Canada AD CF-2016-11R3 requires replacement of each affected bellcrank assembly before further flight. Transport Canada AD CF-2016-11R3 also requires, within 24 months, installing the upgraded collective and cyclic bellcrank assemblies and considers this action a terminating action to the recurring inspections. Finally, Transport Canada AD CF-2016-11R3 prohibits an affected bellcrank assembly from being installed on any helicopter.

### **Discussion of Final Airworthiness Directive**

#### **Comments**

The FAA received no comments on the NPRM or on the determination of the costs.

#### **Conclusion**

These helicopters have been approved by the aviation authority of Canada and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with Canada, Transport Canada, its technical representative, has notified the FAA of the unsafe condition described in its AD. The FAA reviewed the relevant data, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these helicopters. This AD is adopted as proposed in the NPRM.

#### **Related Service Information**

The FAA reviewed Bell Technical Bulletin 429-18-58, Revision B, dated August 23, 2021 (TB 429-18-58 Rev B), which specifies procedures to upgrade certain part-numbered bellcrank assemblies to the bellcrank assemblies that utilize the corrosion resistant steel bearings.

The FAA also reviewed Bell Helicopter Alert Service Bulletin 429-15-21, Revision C, dated August 23, 2021 (ASB 429-15-21 Rev C), which specifies moving the cyclic stick fore, aft, and laterally, and the collective stick up and down from stop to stop to detect deteriorated pivot bearings. ASB 429-15-21 Rev C also specifies inspecting to determine whether the bearings in the collective, lateral, and longitudinal arm assemblies rotate freely. If discrepant arm bearings are found, ASB 429-15-21 Rev C specifies contacting Bell Product Support Engineering to report the findings and replacing the discrepant parts with serviceable parts.

### **Differences Between this AD and Transport Canada AD CF-2016-11R3**

Transport Canada AD CF-2016-11R3 provides requirements if the most recent functional check was performed using a hydraulic test stand as an alternate procedure. This AD provides no such alternate procedure. Transport Canada AD CF-2016-11R3 provides requirements for helicopters that have exceeded the age threshold of 12 months from the helicopter manufacturer date to complete the initial functional check within 30 days from the effective date of its AD. This AD requires the initial inspection within 12 months after the helicopter was manufactured or 30 days after the effective date of this AD, whichever occurs later. Transport Canada AD CF-2016-11R3 allows credit for the corrective actions of Part I if the initial functional check was accomplished prior to the effective date of Transport Canada AD CF-2016-11R3, whereas this AD does not.

### **Costs of Compliance**

The FAA estimates that this AD affects 64 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Inspecting the cyclic and the collective bellcrank assemblies for roughness in the pivot bearings and binding in the collective, lateral, and longitudinal arm end bearings takes about 3 work-hours for an estimated cost of \$255 per inspection cycle.

Installing the upgraded collective and cyclic bellcrank assemblies takes about 18 work-hours and parts cost about \$1,750 for an estimated cost of \$3,280 per upgrade installation.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2020-20-06, Amendment 39-21262 (85 FR 60356, September 25, 2020); and

b. Adding the following new airworthiness directive:

**AD 2022-06-20 Bell Textron Canada Limited (Type Certificate Previously Held by Bell Helicopter Textron Canada Limited):** Amendment 39-21986; Docket No. FAA-2021-1178; Project Identifier MCAI-2021-00986-R.

#### **(a) Effective Date**

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2020-20-06, Amendment 39-21262 (85 FR 60356, September 25, 2020) (AD 2020-20-06).

#### **(c) Applicability**

This AD applies to Bell Textron Canada Limited (type certificate previously held

by Bell Helicopter Textron Canada Limited) Model 429 helicopters, certificated in any category, with a bellcrank assembly part number (P/N) 429-001-523-101, 429-001-523-103, 429-001-532-101, or 429-001-532-103 installed.

**(d) Subject**

Joint Aircraft Service Component (JASC) Code: 2700, Flight Control System.

**(e) Unsafe Condition**

This AD was prompted by new bellcrank assemblies, which have been upgraded with corrosion resistant steel bearings. The FAA is issuing this AD to prevent corrosion of the bearings due to pooling at the bellcrank assembly from precipitation in the forward portion of the roof structure. The unsafe condition, if not addressed, could result in restrictions in the collective, directional, or pitch control systems, and subsequent loss of helicopter control.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions**

(1) For Model 429 helicopters serial number (S/N) 57001 through 57296 inclusive, within 12 months after the helicopter was manufactured or 30 days after the effective date of this AD, whichever occurs later, and thereafter at intervals not to exceed 6 months:

(i) Disconnect the forward ends of the collective control tube, longitudinal stability and control augmentation system (SCAS) actuator, and lateral SCAS actuator. Stow the collective control tube and each SCAS actuator to prevent binding.

(ii) Move the cyclic stick fore, aft, and laterally, and the collective stick up and down from stop to stop to determine if there is any roughness. If there is any roughness in the flight control system, before further flight, remove each pivot bearing P/N MS27646-41, each arm assembly bearing P/N MS27643-4, and each sleeve P/N 120-13-4A from



service and install bellcrank assemblies P/N 429-001-523-101FM and 429-001-532-101FM; or 429-001-523-107FM and 429-001-532-107FM; or 429-001-523-107 and 429-001-532-107.

(iii) Inspect the collective arm assembly P/N 429-001-525-101, the lateral arm assembly P/N 429-001-527-101, and the longitudinal arm assembly P/N 429-001-530-101, by rotating each bearing and determining whether each bearing rotates freely. If there is any binding in any arm end bearing or on the longitudinal bellcrank assembly, before further flight, remove each pivot bearing P/N MS27646-41, each arm assembly bearing P/N MS27643-4, and each sleeve P/N 120-13-4A from service and install bellcrank assemblies P/N 429-001-523-101FM and 429-001-532-101FM; or 429-001-523-107FM and 429-001-532-107FM; or 429-001-523-107 and 429-001-532-107.

(2) For Model 429 helicopters S/N 57001 through 57296 inclusive, unless already accomplished by following paragraphs (g)(1)(ii) or (iii) of this AD, within 24 months after the effective date of this AD, install bellcrank assemblies P/N 429-001-523-101FM and 429-001-532-101FM; or 429-001-523-107FM and 429-001-532-107FM; or 429-001-523-107 and 429-001-532-107.

(3) As of the effective date of this AD, installing bellcrank assemblies P/N 429-001-523-101FM and 429-001-532-101FM; or 429-001-523-107FM and 429-001-532-107FM; or 429-001-523-107 and 429-001-532-107, constitutes a terminating action for the recurring inspections required by paragraph (g)(1) of this AD.

(4) As of the effective date of this AD, do not install any bellcrank assembly P/N 429-001-523-101, 429-001-523-103, 429-001-532-101, or 429-001-532-103 on any helicopter.

#### **(h) Special Flight Permits**

Special flight permits are prohibited.

#### **(i) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(j) Related Information**

(1) For more information about this AD, contact Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7330; email [andrea.jimenez@faa.gov](mailto:andrea.jimenez@faa.gov).

(2) For service information identified in this AD, contact Bell Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J 1R4, Canada; telephone 1-450-437-2862 or 1-800-363-8023; fax 1-450-433-0272; email [productsupport@bellflight.com](mailto:productsupport@bellflight.com); or at <https://www.bellflight.com/support/contact-support>. You may view this referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(3) The subject of this AD is addressed in Transport Canada AD CF-2016-11R3, dated August 30, 2021. You may view the Transport Canada AD on the internet at <https://www.regulations.gov> in Docket No. FAA-2021-1178.

**(k) Material Incorporated by Reference**

None.

Issued on March 10, 2022.

Ross Landes, Deputy Director for Regulatory Operations,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2022-05664 Filed: 3/21/2022 8:45 am; Publication Date: 3/22/2022]